REMARKS

Claims 1 and 9 have been amended for formality and consistency. No new matter has been added by the amendments.

Claims 1-20 stand finally rejected under 35 U.S.C. §102(b) as being anticipated by WO 98/15813. Applicants traverse the rejection and assert that each and every element of applicants' claimed invention is not taught in the cited reference.

The Official Office Action states that the WO 98/15183 reference teaches exposing at least one reactant gas to the solid surface during the monitoring of infrared emissions. The Official Office Actions concludes that this reads on the claimed contacting the adsorbent and measuring the emitted radiation. However, this conclusion does not address *all* of the elements in applicants' claimed invention and for a anticipation to be established, the cited reference must disclose each and every element of the claimed invention.

Specifically, the anticipation conclusion of the Official Office Action does not consider the element found in Claim 1 part (c) which requires "determining at least one surface property of each of the solids using the radiation measurements." Applicants' emphasize that a *surface property* (characteristic of the surface or boundary of a material) of the solids is being determined, and that such *surface property* is being determined using radiation measurements. Applicants discuss surface properties in paragraph 24 (page 10) of their specification. The Official Office Action fails to point ut where WO 98/15183

teaches determining *a surface property* of the solids using th radiation measurements and therefore fails to establish a *prima facie* case of anticipation.

WO 98/15183, in the summary of the invention, states that "each of the individual materials on the array will be screened or interrogated for the one or several material characteristics" (page 5 line 10-11) which the summary goes on to explain can be the activity of the materials (page 5 line 19), specific infrared absorption or reflectance (page 5 line 30), heat transport properties (page 6 line 7), and activity and heat of reaction (page 6 line 17). The detailed description of the invention goes on to describe measuring thermodynamic qualities (page 16 line 18) such as catalyst activity (page 16 line 31); using thermal diffusivities to measure material density, thermal conductivity and specific heat (page 17 lines 5-6); using infrared differential thermal analysis to measure phase relationships (page 20 lines 4-8); using infrared to determine structure activity relationships (page 20 line 15); using infrared to monitor structural and bonding changes occurring during polymerization (page 21 line 14-15); and tracking chemical reactions (page 26 line 9-10). None of the above anticipates applicants' requirement of determining a *surface property*, i.e., a characteristic of the surface or boundary of a material, using radiation measurements.

In its "Generating Arrays of Materials" section, WO 98/15183 states that "[p]roperties which can be screened for include but are not limited to, electrical, thermal, mechanical, morphological, optical, magnetic, chemical, conductivity, super-conductivity, resistivity, thermal conductivity, anisotropy, hardness, crystallinity, optical transparency, magnetoresistance, permeability, frequency doubling, photoemission, coercivity, dielectric strength, or other useful properties..." This recitation of an ambiguous series of large categories of properties without additional specificity or detail do s not anticipate applicants explicit requirement of determining a *surface property* using the radiation measurem nts.

With th cited reference failing to disclose at least ne express l m nt of applicants' claimed invention, the *prima facie* case of anticipation has not been established and applicants' request that the rejection promulgated under 35 U.S.C. §102(b) be withdrawn. Accordingly, in view of the above amendments and remarks, this application is now believed to be in a condition for an allowance of all claims and such action is respectfully requested.

Respectfully submitted,

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